41. A method of increasing the insulin sensitivity of a patient having the Metabolic Syndrome, said method comprising administering recombinant human growth hormone at about 9.5 μg/kg daily.

REMARKS

Claims 22-24, 28, and 41 are now pending in the application.

Claim 22 has been amended to more particularly point out and distinctly claim the subject of the invention.

Claim 41 has been added to recite the preferred dose of GH.

Claims 22-24 and 28 were rejected under 35 U.S.C. § 112 as containing subject matter not described in the specification in such way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner asserts: "Applicants admits the objectives for 'the present study abdominal/visceral obesity' (specification, page 2, line 20) and is not concerned with insulin resistance."

Applicants makes no such admission. The first two sentences of the Introduction recite: "Striking similarities exhibits between The Metabolic Syndrome (also labeled "Syndrome X or Primary Insulin Resistance Syndrome") and untreated GH deficiency in adults. The most central findings in both these syndromes are abdominal/visceral obesity and insulin resistance" (page 1, lines 13-16). The citation provided by the Examiner does not carry any implication of an admission of contrary objective. The passage cited by the Examiner reads in full: "In the present study thirty men, 48 to 66 years of age with abdominal/visceral obesity were treated with recombinant human GH (rhGH) in a 9-month randomized, double-blind, placebo-controlled trial" (page 2, lines 20-22). Moreover, Applicants clearly indicated possession of the claimed invention: "The present study has demonstrated that GH can favorably affect some of the multiple perturbations associated with The Metabolic Syndrome. This includes a reduction in

abdominal/visceral obesity an improved insulin sensitivity and favorable effects on lipoprotein metabolism and diastolic blood pressure." (Page 3, lines 8-11).

Claim 22, the basic claim of the present invention now recites, in pertinent part: "A method of increasing the insulin sensitivity of a patient having the Metabolic Syndrome, wherein said syndrome comprises Primary Insulin Resistance and abdominal/visceral obesity." Growth hormone administration to patients selected for abdominal/visceral obesity resulted in an increased sensitivity to insulin thus manifesting full possession of the claimed invention.

Claims 22-24 and 28 were rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. The Examiner maintains that the instant specification provides no guidance for proportions of GH administered. Page 5, lines 4-12, the section labeled "Treatment" recites: "The daily rhGH dose was 9.5 μg/kg (0.20 IU/kg body weight/week), administered subcutaneously before bedtime. The dose was reduced in half in the event of side-effects." The patients in question were selected on the basis of having a syndrome that comprised insulin resistance. The claims were fully enabled by disclosure at the time of filing.

Claims 22-24 and 28 were rejected under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as being obvious over Sonksen et al. (5,426,096). Anticipation requires the recitation, in the reference, of each claim limitation of the claimed invention. Sonksen recites a" method for treatment of hypoglycemic unawareness." The present invention is a "method of increasing the insulin sensitivity of a patient having the Metabolic Syndrome." The limitation recited in Sonksen is not identical to the limitation recited in the present invention.

For an anticipation rejection under 35 U.S.C. § 102(b) no difference may exist between the claimed invention and the reference disclosure. *See Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q. 841 (C.A.F.C. 1984). Along these lines, anticipation requires the disclosure, in a cited reference, of each and every recitation, as set forth in the claims. *See Hodosh v. Block Drug Co.*, 229 U.S.P.Q. 182

(Fed. Cir. 1986); *Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773 (Fed. Cir. 1985); *Orthokinetics, Inc. v. Safety Travel Chairs*, Inc., 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986); and *Akzo N.V. v. U.S. International Trade Commissioner*, 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986). In determining anticipation, no claim limitation may be ignored. See *Pac-Tex, Inc. v. Amerace Corp.*, 14 USPQ2d 187 (Fed. Cir. 1990).

Sonksen et al. teach away from the present invention. The reference relates to patients having type I diabetes mellitus, insulin sensitive diabetes, secondary to insufficient insulin production. (Col. 1, lines 38-44.) These patients experienced hypoglycemia and or hypoglycemic coma in response to insulin administration. (Col. 1, lines 54-57.) The patients of the present invention were insensitive to insulin. Sonksen et al. administer GH, to insulin sensitive patients and observe that GH antagonizes the actions of insulin. The present invention administers GH to insulin insensitive patients and observes that GH agonizes the actions of insulin. The observation of insulin antagonist activity teaches away from insulin agonist activity.

Teaching away from the invention is a *per se* demonstration of nonobviousness. *U.S. v. Adams*, 338 U.S.39, 148 U.S.P.Q. 479 (1966). The prior art lacks the necessary direction or incentive to those of ordinary skill in the art to render a rejection under 35 U.S.C. § 103 sustainable. The prior art fails to provide the degree of predictability of success of achieving the properties attained by the present invention needed to sustain a rejection under 35 U.S.C. § 103. See *In re Mercier*, 187 USPQ 774 (CCPA, 1975) and *In re Naylor*, 152 USPQ 106 (CCPA, 1966).

In view of the above, consideration and allowance are, therefore, respectfully solicited.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Director is hereby authorized to charge any fees, or credit any overpayment, associated with this communication, including any extension fees, to Deposit Account No. 22-0185.

Respectfully submitted,

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